

good job of summarizing older important concepts and of bringing the reader up to date on current research trends in aneuploidy.

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PHARMACOLOGY AND TOXICOLOGY OF PROTEINS. Edited by John S. Holcenberg and Jeffrey L. Winkelhake. New York, Alan R. Liss, Inc., 1987. 381 pp. \$70.00.

One of the most promising and practical applications resulting from the enormous advances made in the understanding of molecular structure and biology of proteins is in the area of therapeutics and drug development. While recombinantly produced protein and peptide drugs offer the possibility for extremely specific and potent pharmaceuticals for the modulation of biological responses, the toxicology of only a few of these novel agents has been rigorously studied. This collection of papers from a recent UCLA symposium sponsored jointly by Cetus Corporation is devoted primarily to a discussion of the unique problems now being encountered in the analysis of the pharmacokinetics, metabolism, immunogenicity, and toxicology of proteins and peptides. Specifically, the clinical pharmacology of monoclonal antibodies, interleukin-2, interferons, protease inhibitors, and thrombolytics are examined, as well as novel drug delivery systems particularly suited to these experimental therapies.

Unfortunately, this volume, like so many of these hastily edited collections, is a disparate, incohesive, and largely superficial group of descriptive papers. While there are a few valuable contributions, such as the thorough review of monoclonal antibody therapies for infectious diseases, this book suffers most notably from the lack of papers devoted to toxicological testing of gene products (attributed by one speaker to the concurrent Society of Toxicology Meeting!).

The clinical pharmacology of proteins and peptides represents a fascinating and largely uncharted subject, which will undoubtedly gather increased attention from both the medical and scientific communities as new drugs near clinical trials. This volume, however, serves as neither a balanced review nor an appropriate introduction to this subject. Industrial toxicologists may find their colleagues' discussions interesting and somewhat valuable, but the student or clinician interested in protein therapeutics is advised to continue reading the primary literature for now.

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NEURAL PLASTICITY. A LIFESPAN APPROACH. Edited by Ted L. Petit and Gwen O. Ivy. New York, Alan R. Liss, Inc., 1987. 383 pp. \$59.50.

Developmental models have long played a significant role in neurology. Recently, however, there also has been increased interest among biological psychiatrists in the neurodevelopmental processes which regulate the onset, course, and offset of illnesses such as schizophrenia and anxiety disorders. In *Neural Plasticity: A Lifespan Approach*, the thirty-sixth volume in the "Neurology and Neurobiology" series from Alan R. Liss, Inc., leading researchers in the developmental neurosciences review recent progress in three principal areas: (1) early cortical development, (2) transplantation of neural tissue, and (3) senescent developmental changes.

Researchers who are well versed in developmental neurobiology will find that several of the chapters provide useful reviews of microanatomical changes associated with neuronal maturation. Jones introduces the reader to the notion that diverse synaptic structures viewed by electron microscopy reflect several stages of synaptic development and propagation. The notion that synaptic modifications reflect significant developmental processes is further elaborated in several other chapters. Becker and Jagadha describe dendritic pathology occurring in the context of neurologic disorders such as Pick's disease or the gangliosidoses. Steward and his associates review the role of synaptic remodeling as a response to neuronal injury. Petit nicely places the synaptic alterations associated with early development in the context of synaptic modulation produced by learning and memory formation. Flood and Coleman and deToledo-Morrell and her associates follow synaptic remodeling through aging and dementia.

Several chapters in this book review animal studies of neural grafting. Neural transplantation has recently been introduced as an exciting prospect for the treatment of intractable neuropsychiatric disorders. Although the efficacy of these techniques for patients with Parkinson's disease is still equivocal, Buszaki and Gage discussed their relative success in grafting human fetal hippocampal and cortical tissue into rats. Woodruff and Baisden pointed out that transplanted fetal tissue generally does not develop normally, although electrophysiological and behavioral evidence suggests that the tissue grafts may improve lesion-induced electrophysiological abnormalities and behavioral deficits. The consequence of this abnormal development on behavior is unclear. Hippocampal grafts, for example, would be interesting clinically if they could reverse deficits in short-term memory caused by pathological conditions such as Korsakoff's syndrome; however, earlier animal studies suggested that disordered hippocampal function could be more disorganizing for behavior than complete ablation of this brain region. Also, Buszaki and Gage found that grafted rat hippocampal tissue seemed to be more prone to seizures than native hippocampal tissue. Although many issues concerning neural grafting are unresolved, the chapters addressing these issues are concise and clear and may be useful for psychiatrists, neurologists, and neurosurgeons who wish to become versed in this area.

*Neural Plasticity: A Lifespan Approach* is not a comprehensive review or a general introduction to this subject for either basic scientists or clinicians. Nevertheless, by "hitting the highlights" of many areas of developmental neurobiology, this book provides both pre-clinical and clinical researchers with focused updates and reviews that are both interesting and helpful in considering the role of neurodevelopment and ongoing neuronal plasticity in the evolution of neuropsychiatric disorders.

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**OTOLARYNGOLOGY—HEAD AND NECK SURGERY.** 7th Edition. By David D. DeWeese, William H. Saunders, David E. Schuller, and Alexander J. Schleuning II. St. Louis, MO, The C.V. Mosby Company, 1988. 627 pp. No price.

It has now been six years since the sixth edition of DeWeese and Saunders's classic *Textbook of Otolaryngology* appeared in 1982, and over 25 years have passed since the first edition was published. The seventh edition is marked by the addition of two new